



of **BRITISH AIRWAYS**



From the window of a plane, the **land below looks smooth**, just as data visualizations seem flawless at first glance.

But a **closer inspection** of the data reveals **hidden issues**, and today, we'll zoom in to uncover the **real story** behind British Airways' customer experience.

# Why We Chose BRITISH AIRWAYS



British Airways is one of the United Kingdom's leading airlines, offering numerous flights within the United Kingdom and other countries.

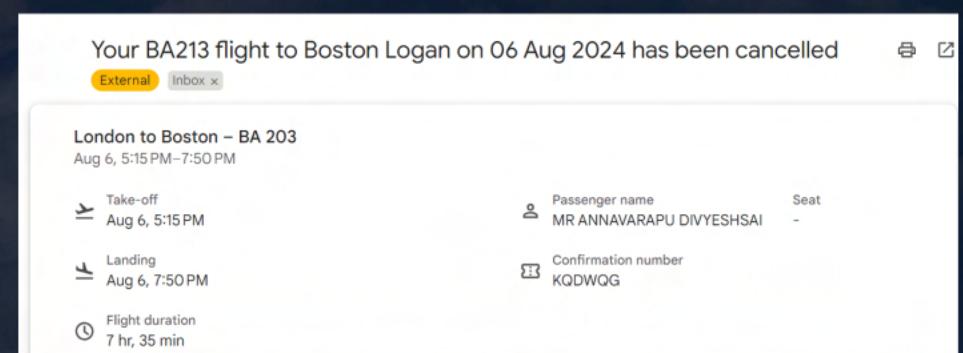
Although, one of our team members, had an experience that initially felt smooth—until **delays, poor communication, service issues**, and missing his flight turned into a frustrating ordeal.



We wanted to know if this was an isolated case



The data revealed something deeper



# Our Data Journey

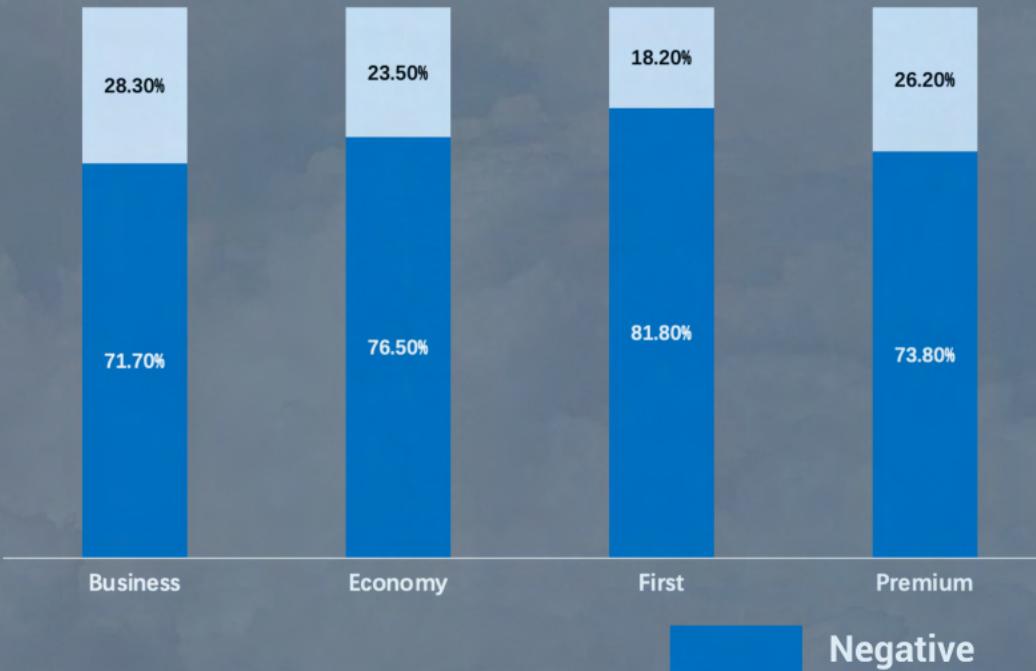


British Airways seems flawless at first glance. Yet, feedback reveals deeper complexities. Are passengers truly satisfied? Let's explore the data behind the facade.

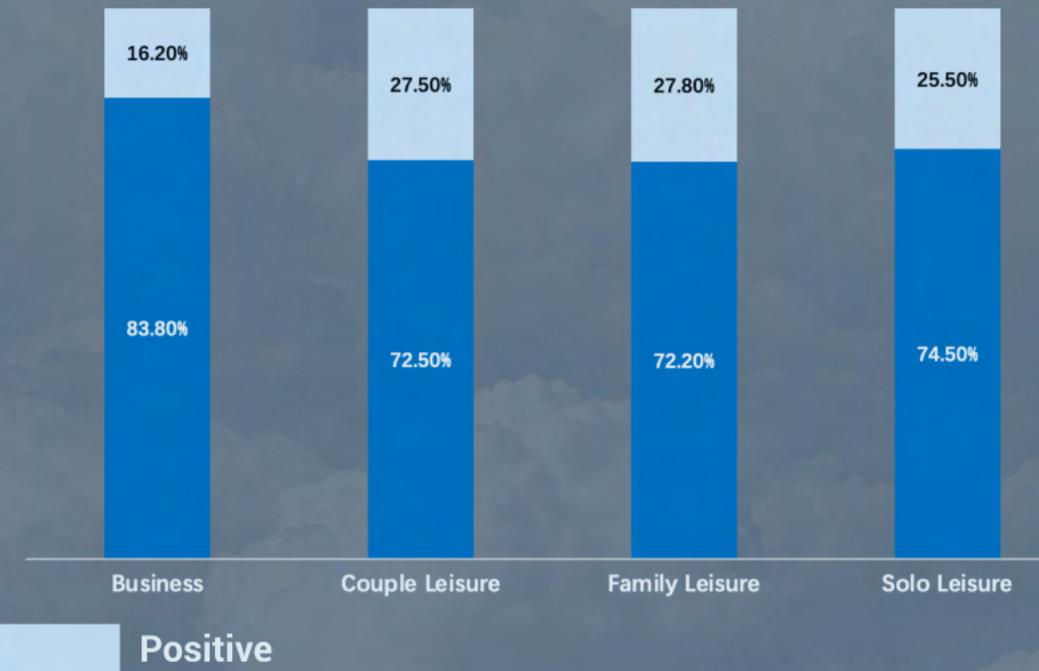
# Sentiment by Traveler Type and Class

Percentage of Reviews

Percentage Distribution of Positive and Negative Reviews by Class



Percentage Distribution of Positive and Negative Reviews by Traveler Type



Business and solo travelers are most critical



First-Class, Premium Economy, and Economy classes have the highest dissatisfaction



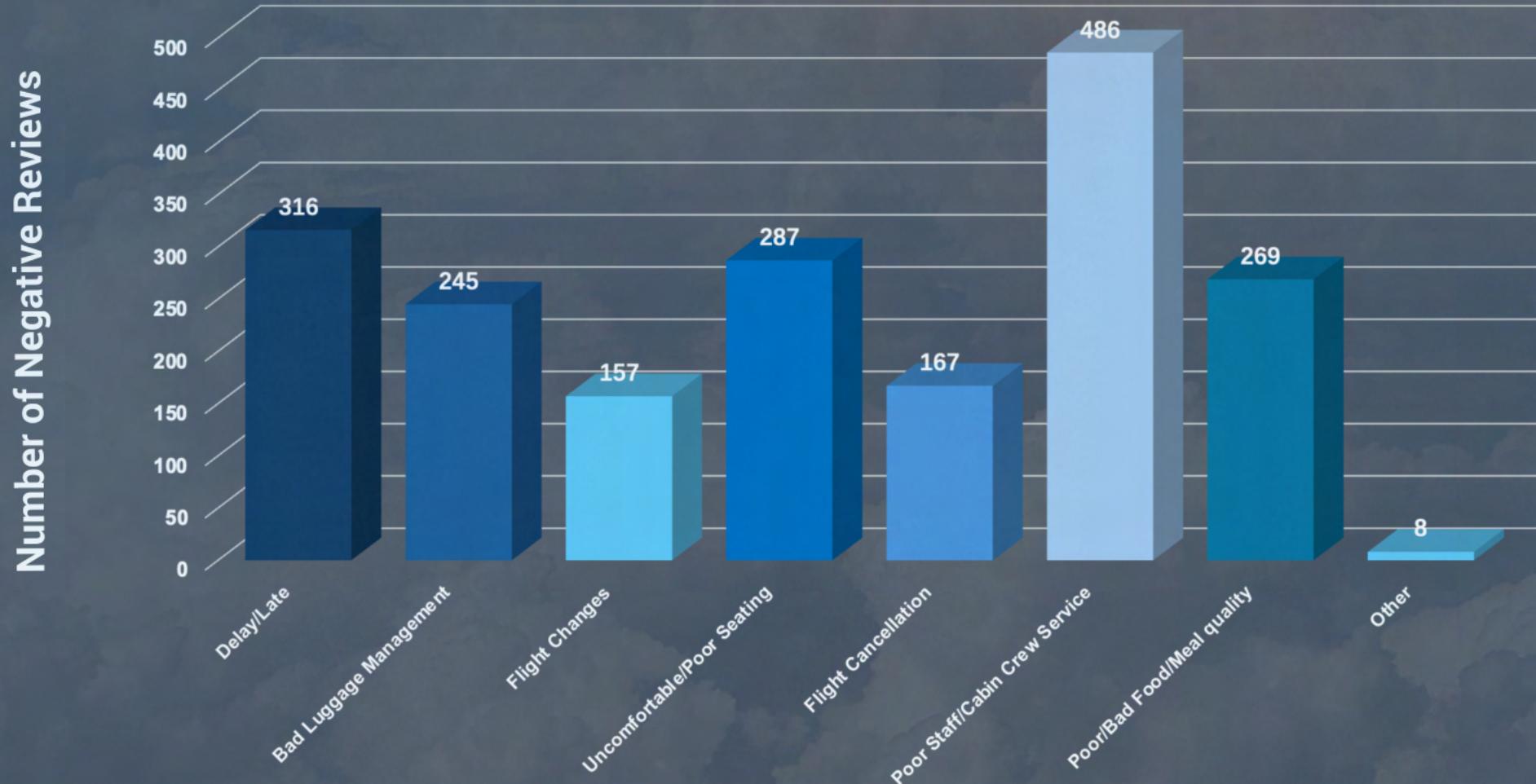
Passengers expect premium service but are often disappointed



Expectations don't match the experience in premium cabins

# Customer Retention: Key Factors of Dissatisfaction

## Root Causes of Negative Reviews



Poor Staff/Cabin Crew Service

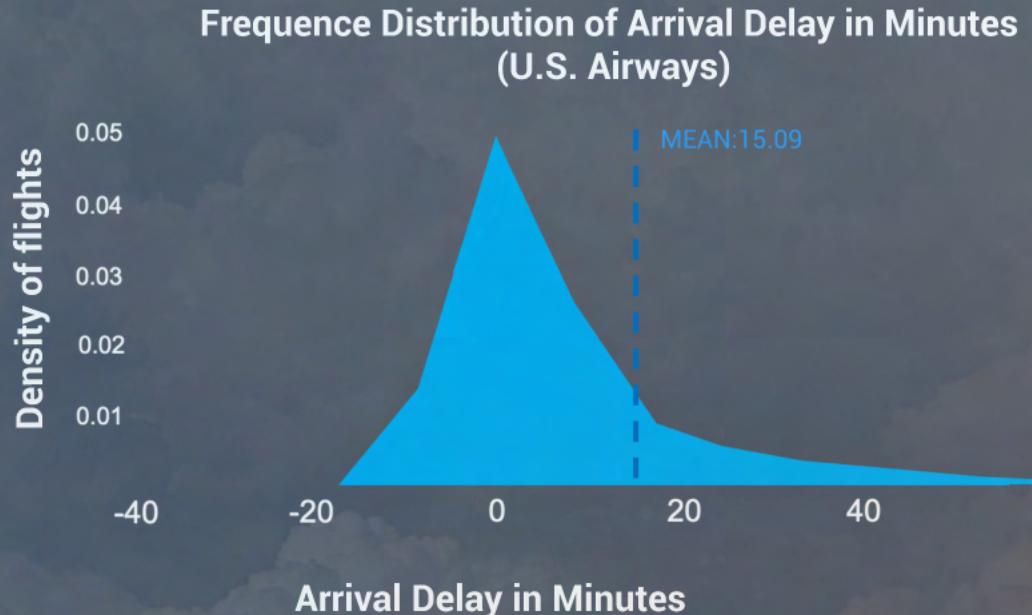
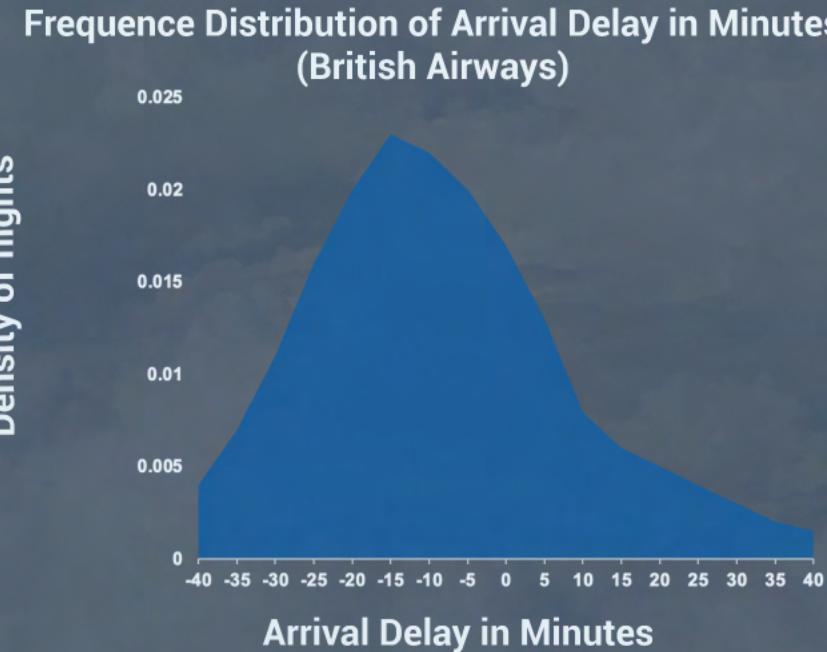


Delay/Late

are two leading cause of negative reviews

# Customer Retention: Key Factors of Dissatisfaction

Many of the British airways flights are **late**, but they performs **better** than U.S. Airline



Peak fall into the interval of -20 to -10 min



Early arrivals are more frequent than late arrivals



Delay might not the main issues for customers dissatisfaction

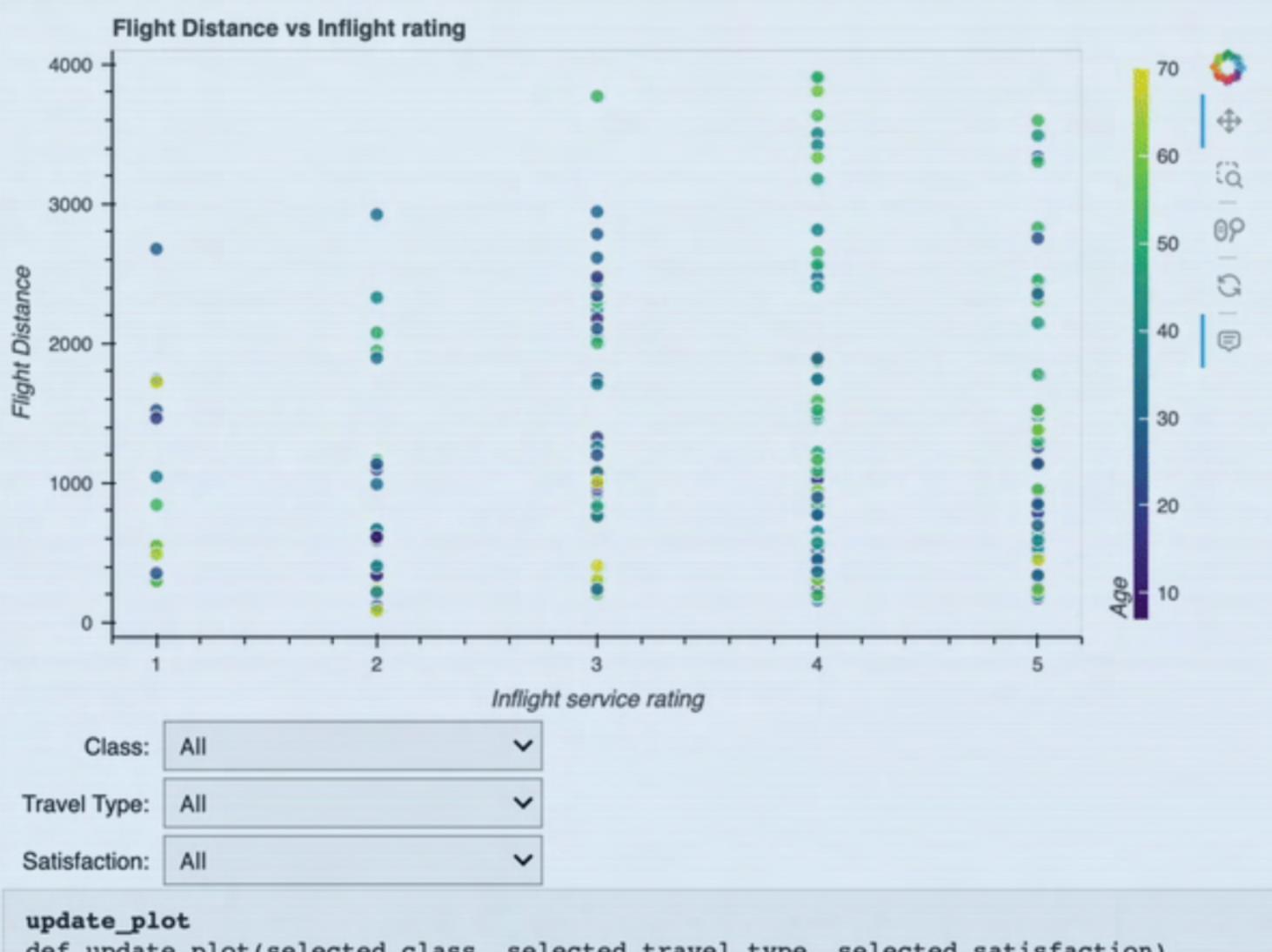


Most flights arrive on time, significant delays still occur, though less frequently



Peak fall around 0 min, mean delay is 15.09 min.

# Customer Retention: Demographic information of Inflight Rating



## Key Takeaways

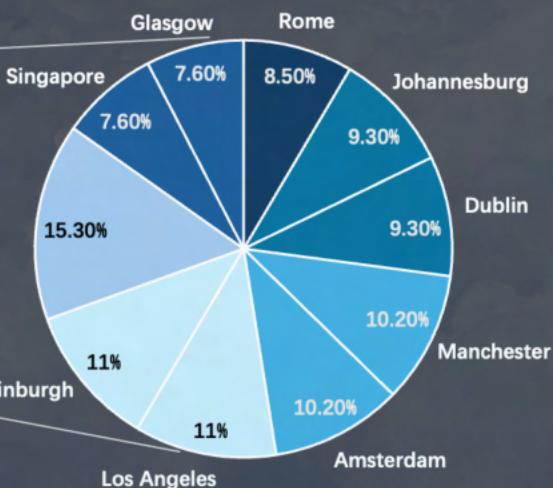
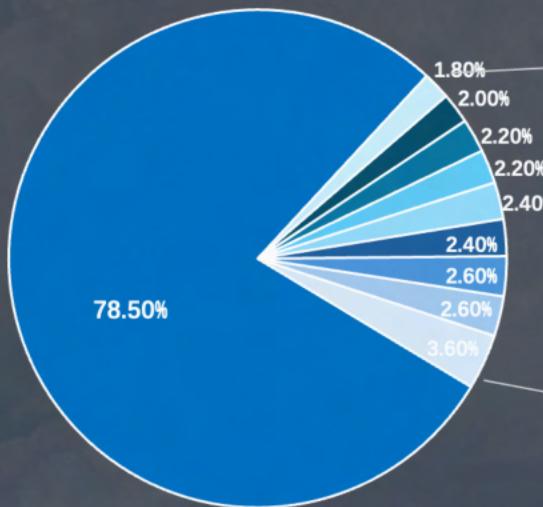


**Older passengers** tend to have lower ratings.

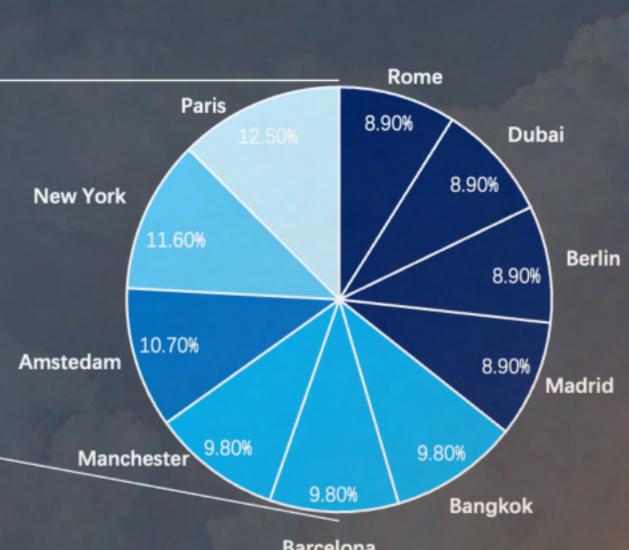
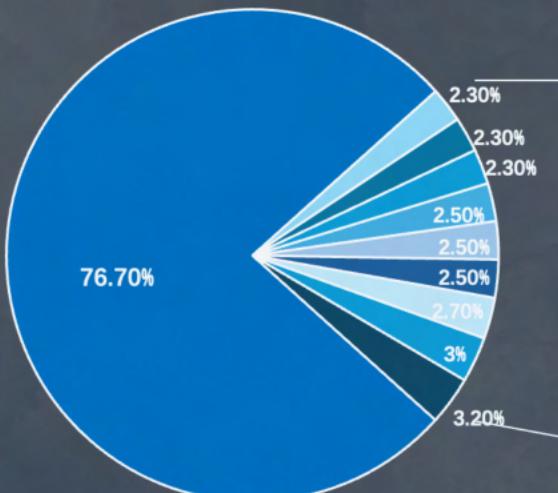
**Younger passengers** may have higher ratings.

**Older passengers** more strict about in flight service might have **Higher Expectations** from Experience

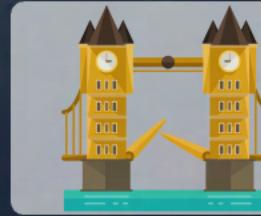
## Top 10 Frequency of People by Origin



## Top 10 Frequency of People by Destination



# Customer Retention: Origins & Destinations with and without London



**London** dominates BA's routes but non-London markets show **global growth** potential.



Key international hubs like **New York** and **Los Angeles** lead the pack without London.



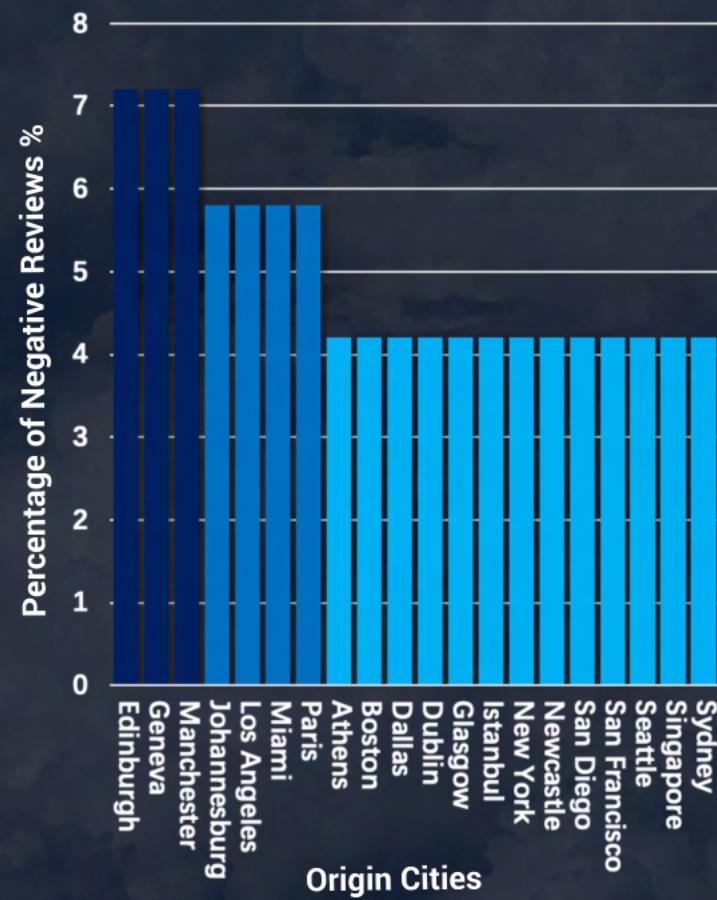
50% of top routes are **non-European**, signaling BA's global focus.



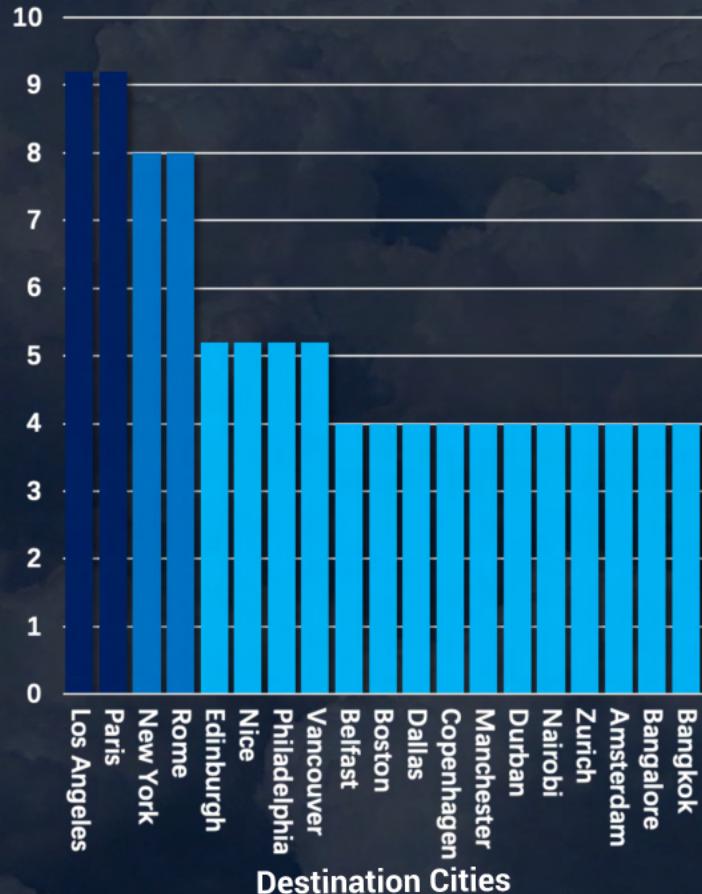
**Opportunity:** Expanding beyond London reduces dependence on one hub.

# Customer Retention: Dissatisfaction based on different cities

Top 20 Origin Cities by Negative Reviews



Top 20 Destination Cities by Negative Reviews



## Key Takeaways



High traffic and congestion in major cities lead to delays and negative reviews.



Busy hubs face resource strain, reducing service quality.



Operational inefficiencies like long waits and flight delays are common.



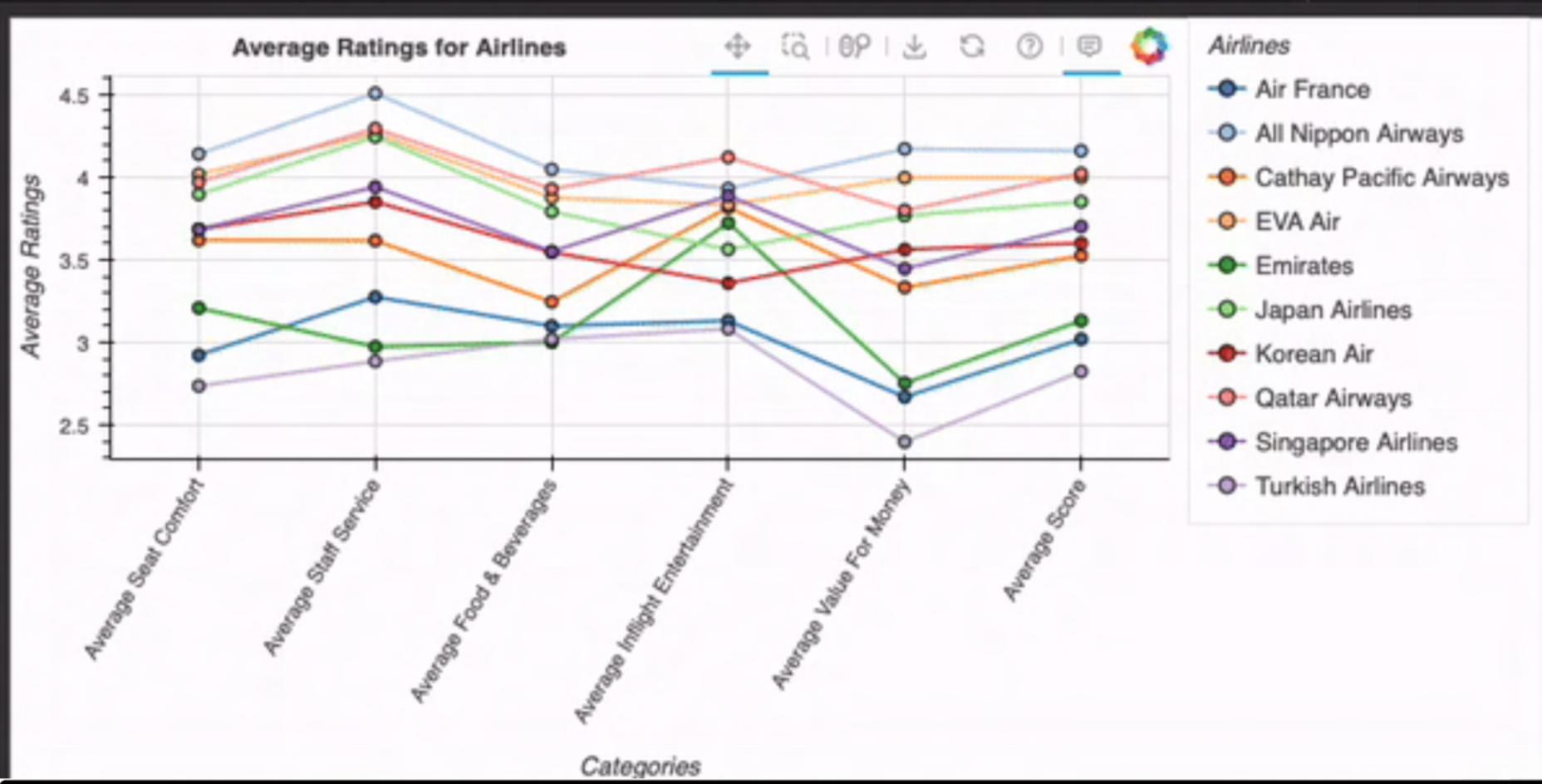
Logistical challenges increase issues like lost baggage in major cities.



Strengthen staff training on routes with many negative reviews.

# Competitor Analysis

## Key Factors Affecting Competitors' Rating



Staff Service category is a key competitive dimension.



Value for Money

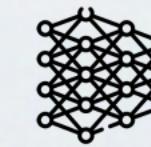
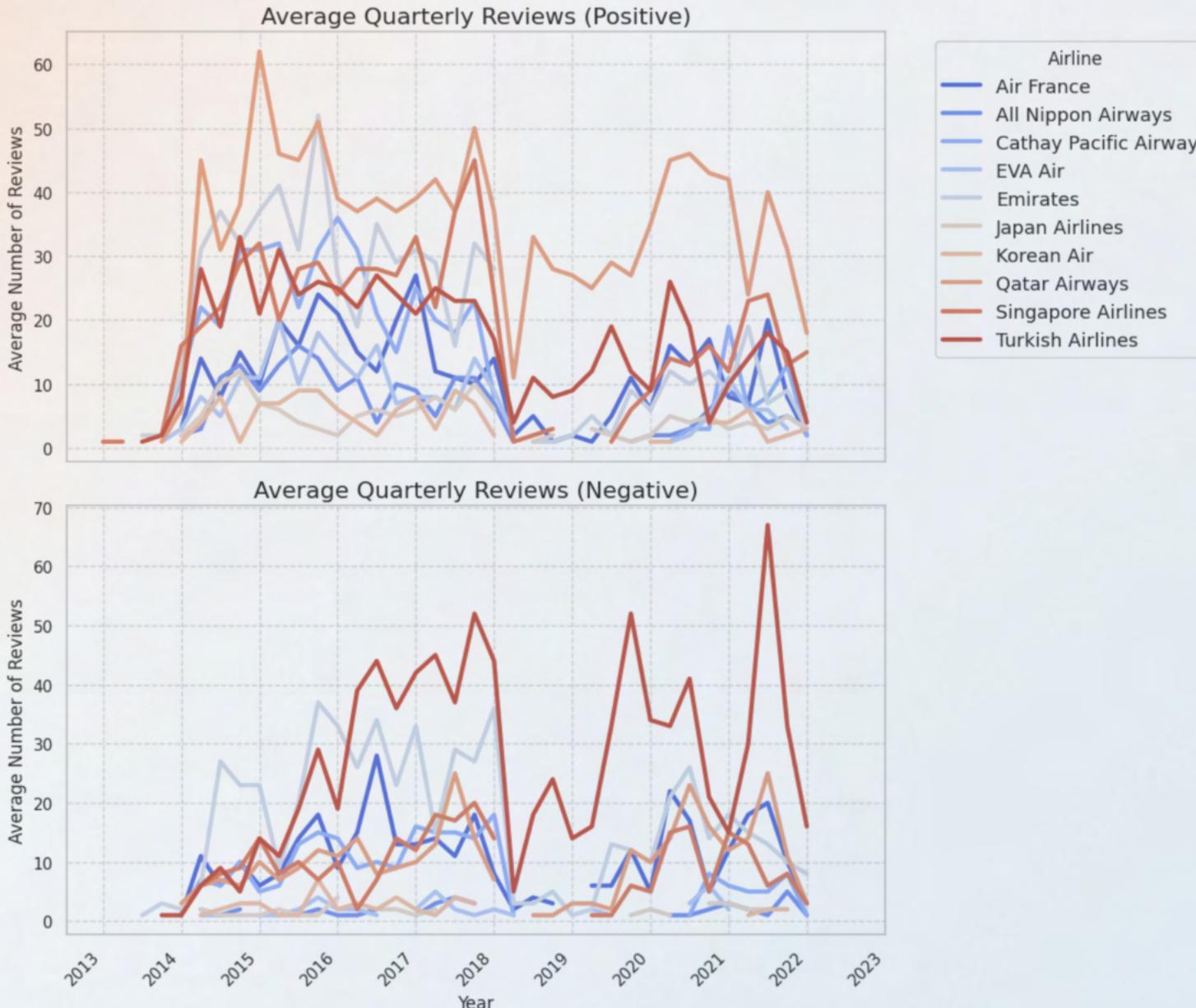


Food and Beverages



Categories to capitalise upon:

# Competitor Analysis : Performance Over Time(Reviews)



Use of **Machine Learning** model



Trends of **positive** and **negative** reviews received by each airline from 2013 to 2022.



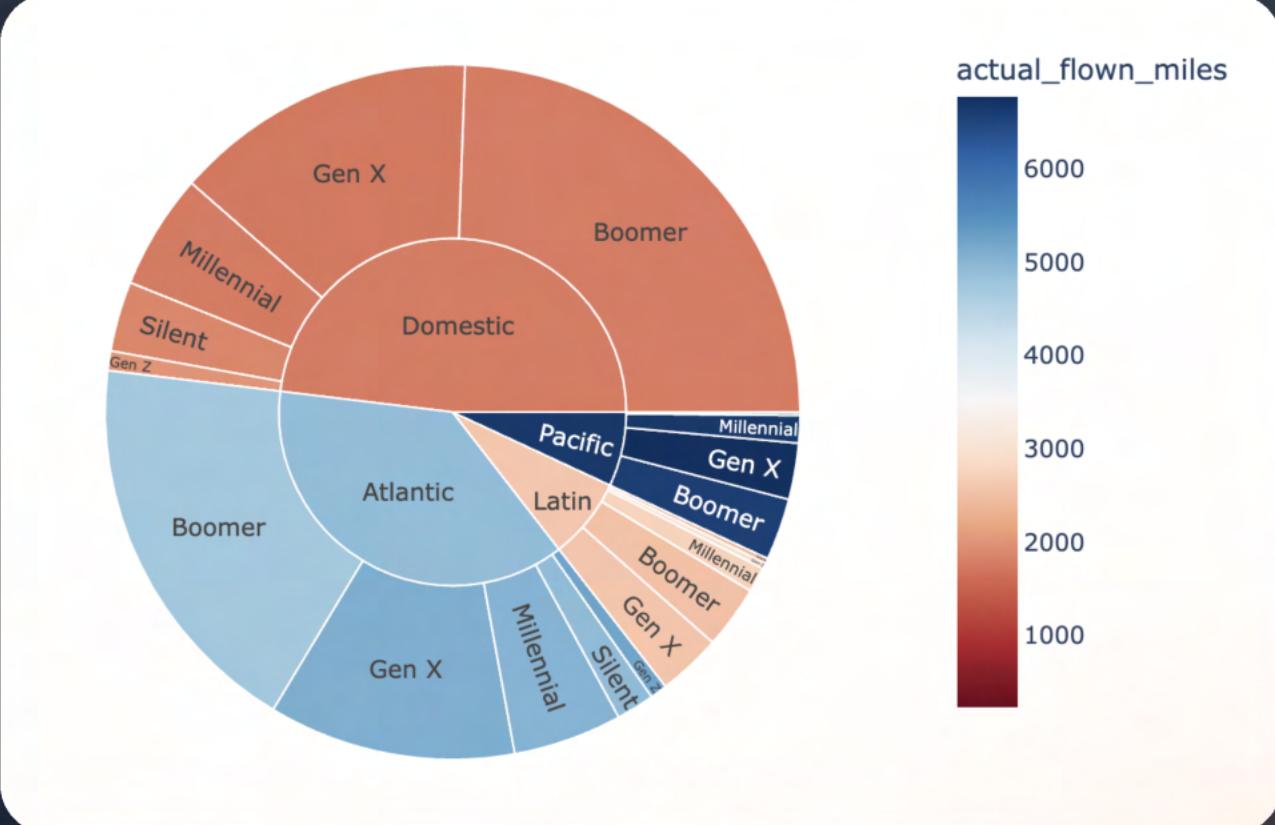
# Customer Attraction: Product demands

They should Promote **different products** based on **preference** of different ages to increase purchase rates 

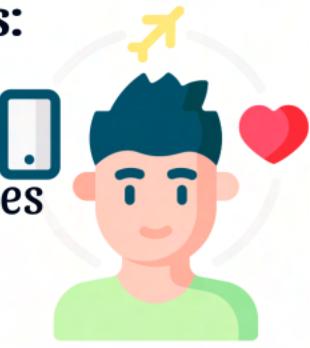
**Boomers:**  
domestic  
routes  
Atlantic  
routes



**Gen X:**  
domestic routes  
Pacific routes



**Millennials:**  
domestic  
routes  
Pacific routes



**Silent Generation**  
domestic routes

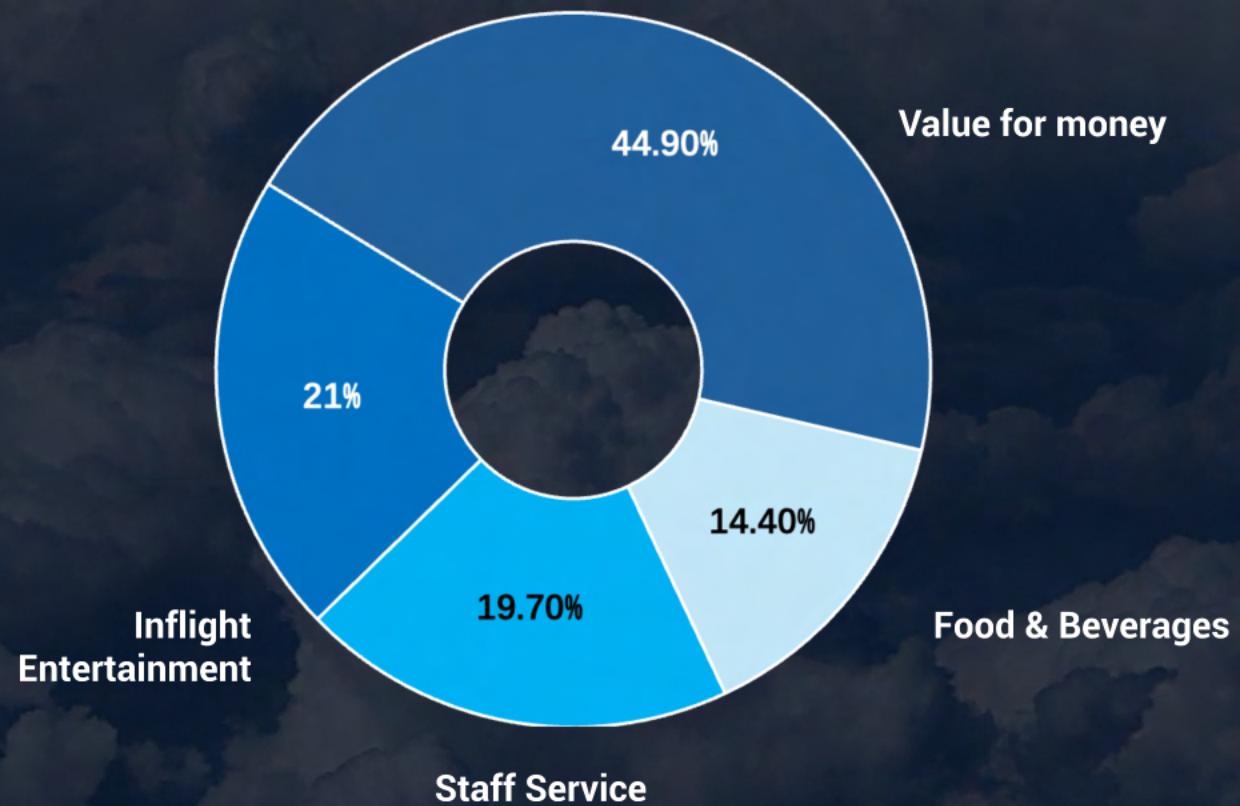


Boomer and Genx dominate both international and domestic markets

# Customer Attraction: Service demands

Improve **value for money**  , **inflight entertainment**  , **staff service**  and **food**  , which are the main factors that determine whether customers recommend it

## Key Issue Leading to Positive Recommendation



?

Why do customers give a flight an overall **low rating** but still choose to recommend it in the end? What are the **key factors** that influence their choice to recommend our flight?

We selected customers whose overall rating was **less than 6** but still chose to **recommend**, and extracted the variables corresponding to the highest rating among all ratings, which constituted the decision factors for recommendation



# Driving Customer Attraction via Booking Preferences



Australians Prioritize Extra Luggage!



Mobile users in Malaysia prefer Inflight Meals!



Thai and Chinese Passengers Are Balanced Shoppers



There's Gold in Mobile Bookings

**Opportunity:** Personalize services by country to boost sales and engagement

**HOW?**



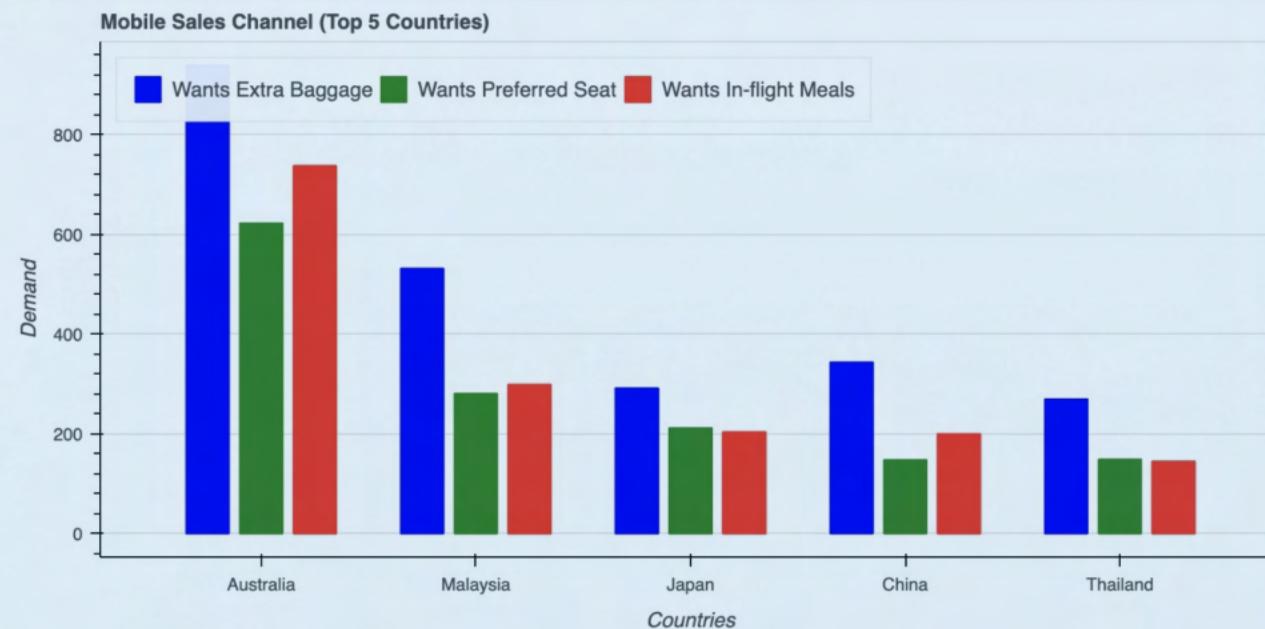
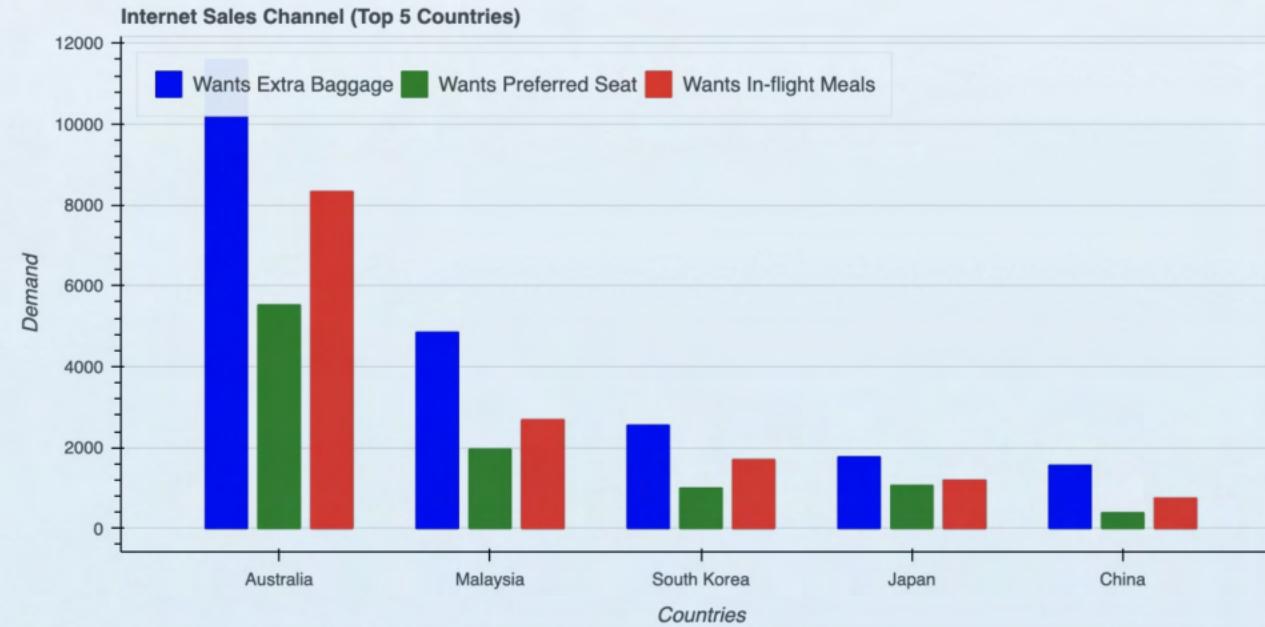
Targeted Upsell Campaigns



Personalized Service Offers



Mobile-Exclusive Deals

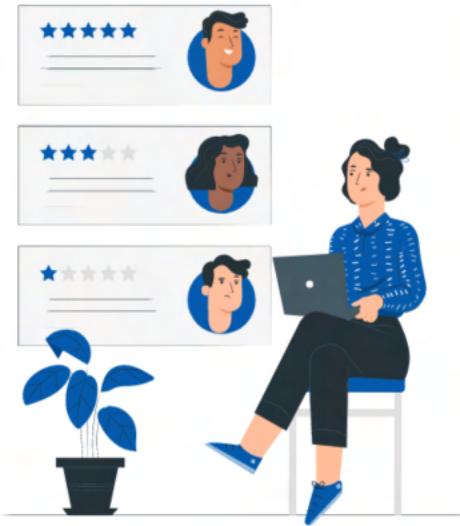


**81.8%** First-Class are dissatisfied



If they retained by 8.18% - could save **20%** of annual revenue.

Boost Operational Efficiency to Reduce **Delays**



If reduced by **20%** - could save **compensation claims** and **operational costs**.

**74.5%** Solo and **83.8%** of Business Travelers gave negative reviews



By improving **services** and **operations**, they could directly impact retention, leading to a **boost in revenue**.

Expand Non-London Routes



Improving **services** on these routes by 15% could bring in more **new customers**.

Final Descent – Strategic Outcomes and Growth Estimation

# Challenges & Limitations

Inconsistent Data Formats

Missing Values

Irrelevant Data

Lack of financial Data

## OUR SOLUTION

Used Python's pandas library to standardize formats

Implemented fill methods and imputation techniques to handle gap

Employed data selection methods in Python to retain only relevant information

Further steps would be to look deeper into the revenues and expenses

An aerial photograph of Logan International Airport in Boston. The image shows multiple commercial airplanes parked at various gates and on the tarmac. The airport's complex network of runways and taxiways is clearly visible against the light blue sky. In the foreground, a large terminal building with a distinctive curved roof and several smaller buildings are visible.

...the aircraft has "safely landed" at  
the Logan airport, **Thank you!**



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